

### **Abstract of the Invention**

A method and apparatus for creating a compressed trace for a program, wherein events are compressed separately to provide improved compression and tracing. A sequence of events for a program is selected, and a sequence of values is then determined for each of the selected events occurring during an execution of the program. Each sequence of values is then compressed to generate a compressed sequence of values for each event. These values are then ordered in accordance with information stored in selected events (such as for example, branch events), where the ordered values correspond to the trace.